NOTES

1. Papers selected for inclusion in General Sessions will be available at the Conference in the following official languages of the United Nations: English, French, Russian and Spanish.

2. Papers selected for inclusion in Specialized Sessions will be available at the Conference in only one of the above official languages.

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SIMPLE TECHNIQUES FOR THE BULK HANDLING AND STORAGE OF FRUIT.

by E.G. Hall and J.D. Mellor, Commonwealth Scientific and Industrial Organization, Division of Food Preservation, Sydney, New South Wales, Australia.

SUMMARY.

In Australia several kinds of bins are being used successfully for the bulk harvesting, transporting and cool storage of apples, pears, citrus and, to a lesser extent, canning peaches. Bulk bins facilitate handling, reduce labour and container costs, allow larger net loads of fruit to be transported and in cool stores save storage space. Expendable bins are being used for the export of apples and pears.

In many small orchards trailer bins mounted on pneumatic tyred wheels are used for harvesting. Low level tip carts drawn manually or by animals are an alternative. In larger orchards pallet bins lifted by tractor fork-lift are common, but a retractable boom jib hoist on a lorry can be used.

If the floor boards of the bins are spaced to leave 7-10% of the bottom open very rapid cooling of fruit is possible in cool stores. New stores should be designed to accomodate bins stacked up to seven high. Floors should be strongly constructed and doorways made wide enough for handling equipment. Orchard bins should be of strong construction to withstand much usage and have a full width, top hinged, gate opening one side, at floor level, to permit the fruit to slide out readily when the bin is tilted.

Bulk containers, of wood or metal, used to transport fruit to packing or marketing centres may, for ease of return, be made so as to collapse, or fit into each other. Even in road transport, citrus fruit and apples travel much better in bulk, than in small boxes.

Apples and pears are commonly placed directly in storage bins, grading being done when the fruit is taken out of cool storage.

Expendable pallet base bulk bins holding 20-25 bushels of apples or pears have enabled successful shipments to be made to markets in the northern hemisphere.

Bins should be of rigid construction with smooth internal surfaces and provided with adequate pallet space. General specifications are given in the paper. It is convenient to relate size to the usual maximum loading width of road vehicles, and square bins are most easily handled.

Most farm tractors equipped with hydraulic lifting gear can be fitted readily with fork-lift attachments for work in the orchard. If a hoist is used, bins should be fitted with hooks or rings.

Full bins of fruit on arrival at the packing shed or cool store may be moved by fork-lift equipment, hoist, gantry or roller conveyor. Internal combustion engines should not be used to power the lifting devices in confined spaces. A cheaply constructed, but efficient, hand operated fork-lift and means for emptying trailer bins are desirable.

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